DoD RFID Policy :
Leading the Way in two Worlds – Active and Passive RFID

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Facing new challenges…

- **Rapidly moving force on a dynamic battlefield**
- **Demand for better information on assets**
- **Need for more effective management of inventory**

Lessons from OIF…

The warfighter's requirements . . .

- Connectivity
- Access to Information Systems
- Data Capture
- Data Fusion
- Information Accessibility

Can be addressed through:

- Best Practices
- Enterprise Integration
- Commercial-Off-the-Shelf-Technology (COTS)
- Commercial Standards

DoD would be like Wal-Mart . . .

. . . if Wal-Mart's 3000+ stores moved

. . . if a Wal-Mart stockout meant that everyone inside the store could die

. . . if Wal-Mart's 3000+ stores moved

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Wal-Mart is a lot like DoD

Food, clothing, tools, batteries, office supplies, housekeeping suppliers, fuels, lubricants, greases, guns, ammunition, camping equipment, field gear, personal care products, medical supplies and prescriptions, consumer durables, vehicles, construction materials, tires and other repair items.

Comparable product lines.
Are these DoD classes of supply, or Wal-Mart Lines of business?

RFID for DoD

VISION: Implement knowledge-enabled logistics through fully automated visibility and management of assets in support of the warfighter.

GOAL: Employ mature and emerging supply chain technologies to optimize the supply chain.

OBJECTIVE: Utilize RFID, as an integral part of a comprehensive suite of AIT technology, to facilitate accurate, hands-free data capture in support of business processes in an integrated DoD supply chain enterprise.

RFID is an enabler to create an Integrated DoD Supply

Cases/Pallets are labeled with passive RFID tags. Cases are associated to pallet

Cases/Pallets are read as they are received and **new shipments are labeled**. Orders are verified for

Cases/Pallets are associated with **Active RFID** to provide TAV.

Data is timely and accurate via network of linked readers allowing asset visibility along the entire supply chain

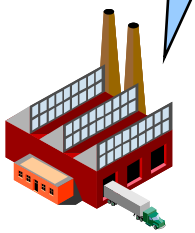
Manufacturers/ Suppliers

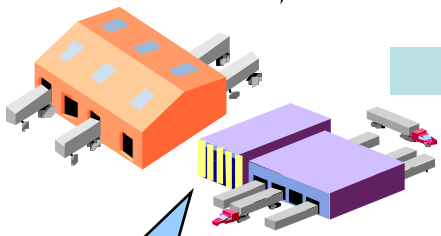
Distribution Centers/Depots/TDCs

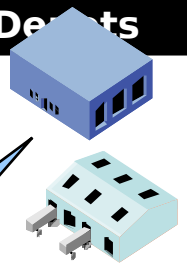
Commercial/Military Carriers

TMO/Supply/ Theater Depots

Customer







T ely and Accurate Data

When shipments are reconfigured a new RFID Tag is created for the pallet and associated with cases on that pallet

The **cases/pallets are automatically received** with few disputes and info is shared with the AISs. Reconfigured shipments receive a new RFID Tag.

Customers have visibility of requisitions and **are confident** in the status provided by the system

WHO is Affected ?

- **All DoD Military Departments and Agencies**
  - **Internal logistics processes**
  - **Contracts with suppliers**

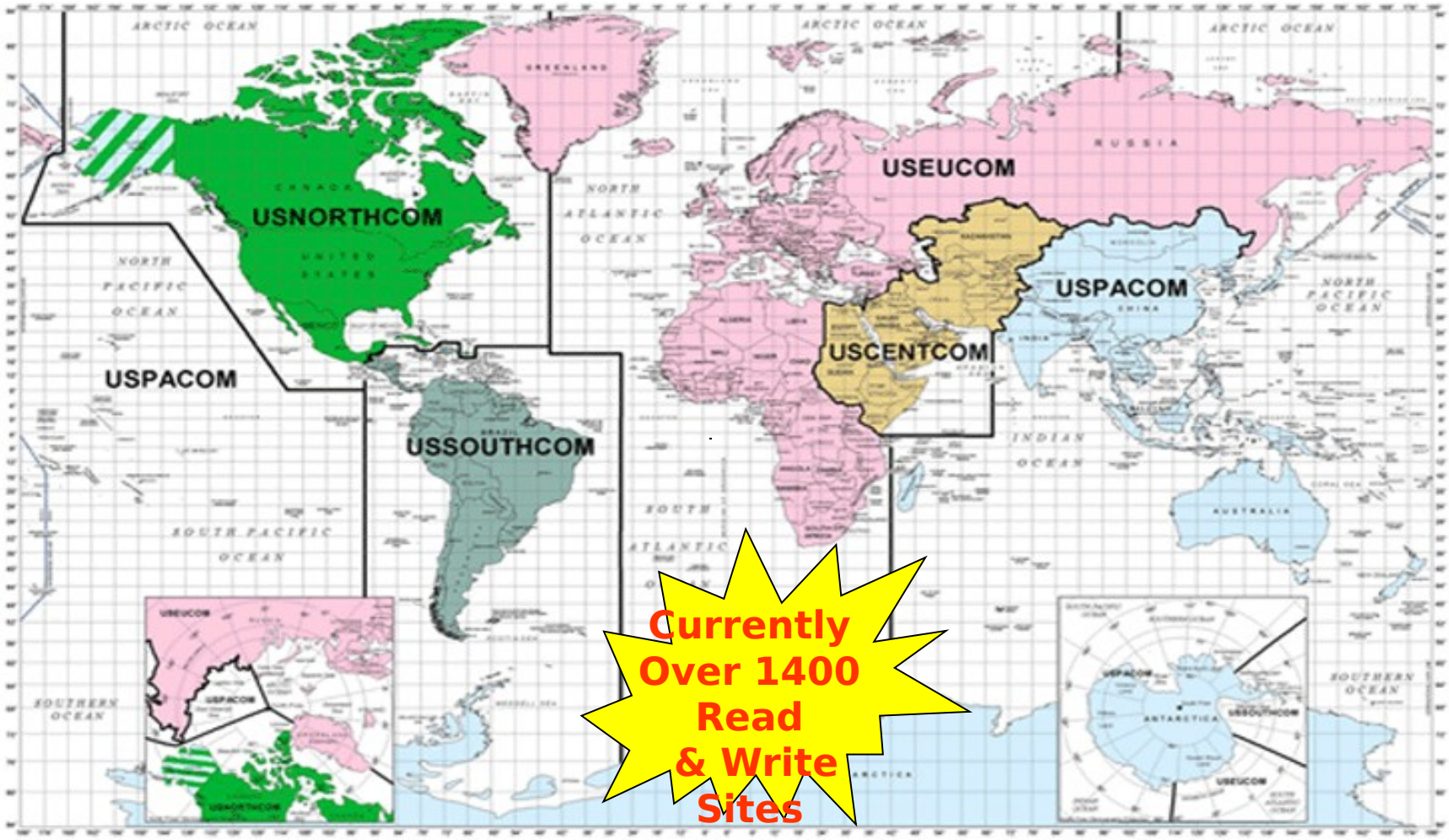
- **All suppliers of materiel and goods to DoD**

Active RFID

- **Immediately implement *active* RFID**
  - **Put RFID tags on:**
    - **Consolidated sustainment & am**
      containers & air pallets
    - **Unit movement equipment**
    - **Prepositioned materiel and supplies**
  - **Establish RFID infrastructure to support core business processes**
  - **Program and budget (O&M or DWCF/TWCF) for RFID operations**
  - **DLA manage Active Tags**

Supports COCOM Directive Authority For Logistics

Active RFID Global Infrastructure



Passive RFID in the Supply Chain

- **Tagged items/cases/pallets shipped from suppliers**
- **Shipment/order data to DoD**
  - ***Advanced Ship Notice (ASN)* Required**
- **Shipment/order data captured in DoD Data Environment**
- **RFID tag read on arrival at DoD Receiving Point**
- **Tag read generates *Transaction of Record***
  - ***Receipt***
  - ***Acceptance***
  - ***Close-out***
  - ***Payment***
  - ***Inventory adjustment***
  - ***Update to asset visibility systems***

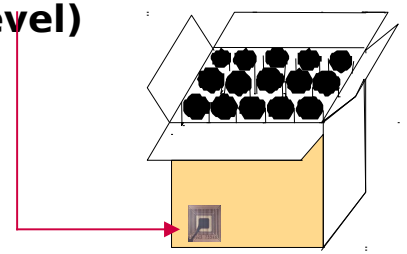
Passive RFID Requirements

- **Tagged cases and pallets shipped to DoD receiving points beginning Jan 2005**
- **Tagged *packaging* for items that require a Unique Identification (UID) shipped to DoD receiving points beginning Jan 2007**
- **Tags will use EPC-technology specifications**
  - **Currently available:**
    - Class 0-64 bit
    - Class 1-96 bit EPC tags
  - **When available:** UHF Generation 2 EPC tags

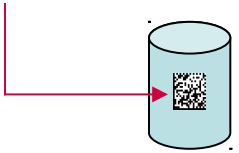
Passive RFID Enables the Supply Chain

RFID Tag (Case Level)

RFID Tag (Item Package Level)



Data Matrix (Item Level)



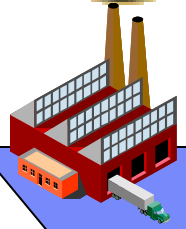
RFID Tag (Pallet Level)

WHEN does Implementation take Effect?

- **Active RFID – Operational; Implementation Continuing**

- **Passive RFID**
  - **DoD – Implementation underway now**
  - **Suppliers – Effective Jan 2005 for all new solicitations issued after October 1, 2004 for delivery of materiel on or after January 1, 2005.**

DoD Supplier Implementation Strategy for Passive RFID Commencing on January 1, 2005.



Commencing January 1, 2005

CONUS DLA Depots

- **San Joaquin CA**
- **Susquehanna PA**

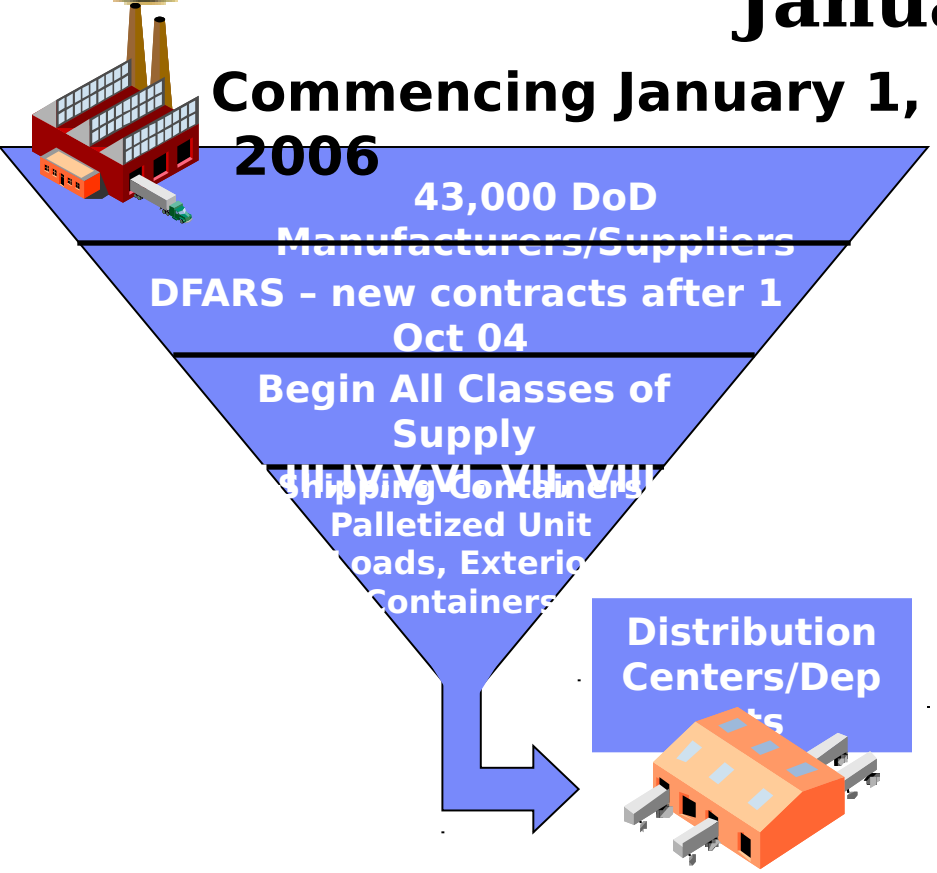
85% of shipments to DoD

Initial Implementation Locations

- Camp Lejeune
- Blue Grass Army Depot
- Dover AFB
- Seymour Johnson AFB
- Ramstein AFB
- Norfolk FISC
- Charleston AFB
- Tinker AFB
- Kaiserslautem
- Spangdahlem

DoD Supplier Implementation Strategy for Passive RFID Commencing on January 1, 2006.

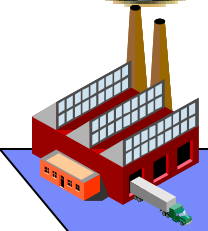
Commencing January 1, 2006



- Strategic CONUS DLA Depots,
- TRANSCOM Facilities & Service
- Maintenance Facilities

- Anniston
- Barstow
- Cherry Point
- Columbus
- Corpus Christi
- Hill
- Jacksonville
- Norfolk
- Dover
- City
- Puget Sound
- Red River
- Richmond
- San Diego
- San Joaquin
- Susquehanna
- Tobyhanna
- Warner

DoD Supplier Implementation Strategy for Passive RFID Commencing on January 1, 2007.



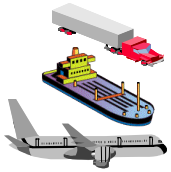
Commencing January 1, 2007

- 43,000 DoD Manufacturers/Suppliers
- DFARS – new contracts after 1 Oct 04
- All Classes of Supply
- Shipping Containers, Palletized Unit Loads, Exterior Containers, UID Item, Unit Pack

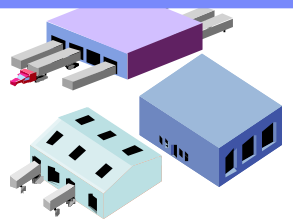
All Locations

Distribution Centers/Dep

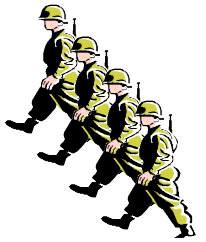
POEs/PODs



TMO/Supply/ Theater Depots

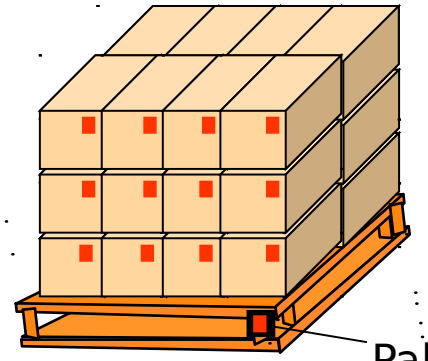


Customer

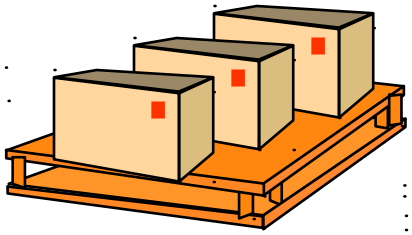


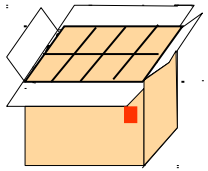
Implementation Level of Tagging

~~Jan 1, 2005 – Dec 31, 2006~~

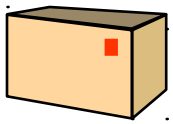


Palletized Unit Load
Tag YES

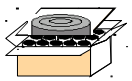




External Container YES



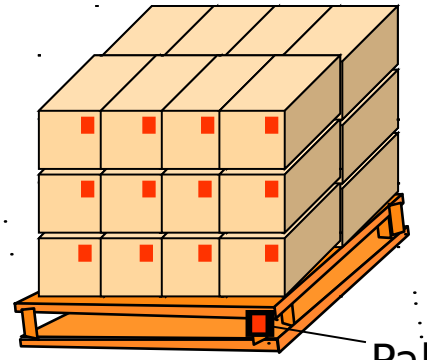
Shipping Container YES



UID Item Unit Pack* NO

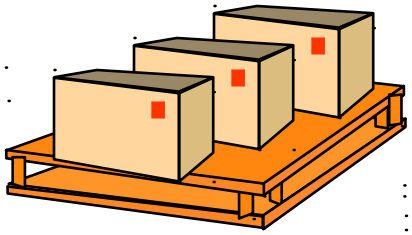
***If the UID Packaging is also an External Container or a Shipping Container, it will have an RFID tag.**

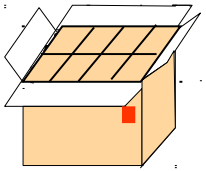
Implementation Level of Tagging
~~January 1, 2007~~



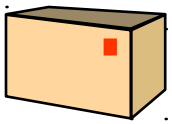
Pallet tag

Palletized Unit Load
Tag
YES

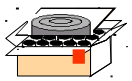




External
Container
YES



Shipping
Container
YES



UID Item Unit
Pack
YES

Commodity Implementation

Commencing January 1, 2005

- **Class I Subclass – Packaged Operational Rations & Packaged Food**
- **Class II – Clothing, Individual Equipment, Tools, & Administrative Supplies**
- **Class VI – Personal Demand Items**
- **Class IX – Repair Parts & Components**

Commencing January 1, 2006

- **Class I – Subsistence & Gratuitous Health & Comfort Items**
- **Class III – Packaged Petroleum, Lubricants, Oils, Preservatives, Chemicals & Additives**
- **Class IV – Construction & Barrier Equipment**
- **Class V – Ammunition-all types**
- **Class VII – Major End Items**
- **Class VIII – Medical Materials**

Initial Passive UHF RFID Tag Specific

Class	User Memory Size (bits)	Origin	Encoding	Tag Data Constructs
0	64	Supplier	Serial	Tag Manufacturer Encoded Serialization
1	96	Supplier	EPC	SGTIN, GRAI, GIAI, SSCC
1	96	Supplier	DoD	DoD Tag Construct
1	96	DoD	DoD	DoD Tag Construct

RFID Benefits in the DoD Supply Chain

- **DoD Business Processes**
  - **Facilitates Hands-Off Data Capture**
  - **Improves Data Accuracy**
  - **Enhances Asset Visibility**
- **Downstream Derivative Improvements**
  - **Optimizes Transport/Lift Utilization**
  - **Reduces Logistics Footprint**
  - **Improves Manpower Utilization**
  - **Improves Force Tracking**
  - **Improves Logistics Processing Time**
  - **Enhances Interoperability with Industry**

DoD Next Steps

- **POLICY**
  - **Publish Final RFID Policy – Jul 04**
- **IMPLEMENTATION**
  - **Interim DFARS Rule for passive RFID – Sep 04**
    - ***Solicitations issued after 1 Oct 04 for delivery after 1 Jan 05***
  - **Use EPC technology – Jan 05**

Summary

- **Supporting *Current Operations* with Active RFID**
- **Implementing Passive RFID**
- **Finalizing EPC requirement**
- **Developing final RFID polic**
- **Integrating Data Environm**

Setting the foundation for future supply chain improvements…TODAY!

The End Game

Ubiquitous, cost-effective capability to project and sustain power.

QUESTIONS?